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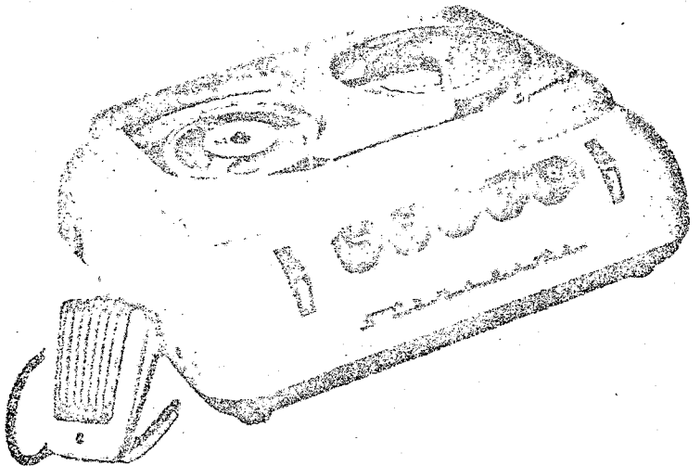

Service-

Manual for

Stenorette S

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Please address all Technical correspondence on GRUNDIG equipment to:-

The Chief Engineer,
Grundig (Great Britain) Ltd,
Kidbrooke Park Road,
LONDON S.E.3

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Telephone:- LEE GREEN 8541 (Ext.23).

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SECTION 1. INTRODUCTION

The Stenorette 'S' is a portable office Dictating Machine incorporating full facilities for all usual office purposes.

The machine is a single track tape recorder using a non-reversible spool of tape and a unique system of tape drive. It operates at a mean tape speed of 2 inches/second giving a recording/playback time of approximately 25 minutes per tape.

Full facilities for microphone and telephone adaptor as well as output connections are provided and the Stenorette 'S' can be remotely controlled by both foot and typewriter switches.

Drive is obtained from a split phase induction motor. The tape is driven by an arrangement of idler pulleys and rim-drive wheels.

The heavy construction of the outer rotating cage of the motor ensures constancy of speed and the use of self-lubricating bearings permits long periods of operation without service.

The electronic chassis consists basically of the recording and playback amplifiers, the oscillator, supplying HF bias to the recording head; the erase head, supplied with DC for DC erasure; and a network for the automatic gain control.

The Stenorette 'S' features a Tone Control two-position sensitivity switch, which together with the automatic gain control overcomes the need for a separate recording level control. An illuminated position indicator is fitted, to enable the location of the beginning of a recording on any part of the tape. Provision is also made for the backspacing of the tape by means of any of the remote controls. The microphone is used both for dictation and playback and incorporates a start/stop switch, backspace on record (for correction purposes) and an indicator light.

SECTION 2 CIRCUIT DESCRIPTION OF THE STENORETTE 'S'

The Stenorette 'S' differs from the Standard Stenorette by enabling the switching from Record to Playback with a Switch incorporated in the Stenorette Microphone. A Changeover Relay is incorporated in the instrument which is operated by the switch on the Microphone and which changes over from 'Record' to 'Playback'. This permits corrections to be carried out without touching the machine itself, by controlling it from the Microphone. When pressing the Recording Button, A1 completes the circuit for FM, and A2 completes the circuit for Changeover Relay K. A3 supplies current to the pilot bulb in the Microphone from the LT windings of the Mains Transformer and through A4 and K8 Condensers C23 and C22 are charged.

2.1. FUNCTION OF THE CHANGEOVER RELAY

The energised changeover relay switches all 'K' contacts to 'Record'. The HF Generator is put into operation via the Erase Head and Contact K1. Contact K2 interrupts the connection from Output Transformer to Microphone Socket, K3 changes over the connection of the Recording Head from Input Transformer to chassis and K4 changes over from Volume Control (R8) to a fixed grid resistor R7 and the AVC is now operative. Contacts K5 and K6 connect the Microphone to the Input Transformer and K7 disconnects the L.H. Relay (RM) from the Condenser chain C23/C22. Via A4, K8 connects the 300 m.f.d. Condenser (C23) to chassis via 100 ohms. The tape will only run if a plug of the Microphone, Headphones and Telephone Adaptor or a connecting cable is inserted into the socket on the R.H. side.

2.2. REMOTE CONTROL OPERATION AND BACKSPACING

The Backspacing Control on top of the Microphone Type 502 can only be used if the Recording Button on the instrument and the Start/Stop Button on the side of the Microphone are fully depressed. When depressing the Backspace Button (it also changes from Record to Playback) the circuit for the changeover relay is opened via Contact 6 on the R.H. socket of the Stenorette. All 'K' contacts change to their new position (drawn as full lines) and the instrument switches from Recording to Playback (contacts K1 to K6). At the same time contact K7 opens the negative connection of Condenser C23 (300 m.f.d.) and connects this to the L.H. solenoid (RM) via K7 Condenser C23 discharges through the RM and this attracts. An increase of the torque is achieved by bridging resistor R23 (100 ohms), the connection of which is again removed via contact RM3 when the Relay falls off. Contact RM1 removes the chassis connection of C22 (500 m.f.d.) and the loading of this Condenser is now also fed through RM. To be able to adjust the time constant of this system and with it the amount of backspacing, R27 (500 ohms) and pre-set R25 (1 Kohm)are

2.2. REMOTE CONTROL OPERATION AND BACKSPACING (CONTD)

incorporated. The pre-set will allow the amount of backspacing to be adjusted. It is fitted with a screwdriver slot and is fixed near the back of the Stenorette 'S'. Contact RMII disconnects the supply to FM and interrupts the forward running of the tape. After discharging Condenser C22 and C23, RM falls off and the tape again runs forward in the 'playback' position. When releasing the Record/Playback Button on the Microphone, the changeover Relay switches back into the Record position and dictation can recommence. As long as the Record/Playback Button on the Microphone is kept depressed, the Stenorette 'S' will playback through the Microphone. Whilst backspacing, the audio output is muted via contacts FM II. The use of the Record/Playback Button on the Microphone is only advantageous if this takes place whilst dictating. In the more sensitive 'conference' position the high sensitivity of the instrument may give rise to slight disturbing effects on the reproduction.

When depressing the Backspace and Record/Playback Button on the Microphone more than once, the tape can be transferred for a greater length. This should only be done however if it is intended to correct a greater length on the tape since erasing of the recording always takes place when releasing the button and depressing again (machine then switches back to "Record"). When playing back a recording after the tape has been transferred back by a number of depressions on the Backspace Button (Record/Playback Button) a high pitched sound may become audible which is due to the recorded H.F. current. With the tape running at its normal speed this is converted to audio frequency of a high pitch. If the tape is to be transferred from right to left for a greater length, the Stop Button on the instrument should always be depressed first and the Fast Wind Right to Left Button should then be operated.

2.3. BACKSPACING WHEN PLAYING BACK

For playing back the appropriate buttons on the instrument should be depressed. Start/Stop and Backspacing can then be selected by means of the Hand or Typewriter Control or the Foot Control. It is not possible to backspace from the Microphone in the Playback Position.

SECTION 2 CIRCUIT DESCRIPTION OF THE STENORETTE 'S' (CONTD)

2.3. BACKSPACING WHEN PLAYING BACK (CONTD)

Contact W1 (parallel to A1) completes the circuit for FM and W2 that of the backspacing automatic. Contact W3 puts the Tone Control (R3) into operation. When playing back the Changeover Relay (K) is without current as A2 on record button is open. If the Start Button is depressed on any of the Remote Controls, FM is supplied with current via contact 1 of the 4-pole Remote Control Socket, contacts 3 and 4 of the 6-pole socket (which are shorted out in the plug of the Stethoscope Head Set) and via contacts RMII and W1.

SECTION 3 LIST OF ADDITIONAL SPARE PARTS FOR THE STENORETTE 'S'

Part No.	Item.
90/98	Input Transformer
90/131	Contact Assy. 4
90/132	Contact Assy. 3
90/135	Rec. Channel & Press Button Assy.
90/137	R.H. Socket & Brkt Assy.(6 pin)
90/145	Head Relay ('K')
90/179	Eccentric Pin Assy
	Pot. 1 MOhm Neg. Log. w.
90/216	C/O Switch
90/217	Pre-Set Pot. 30 Kohm Lin.
90/260	Control Knob L.H.
57/225	'U' Friction Spring

SECTION 4 GENERAL NOTES ON SERVICING

The Stenorette 'S' differs from its predecessor only as follows:

a) The switching operations, which were previously carried out on the main switchbank, are now activated by Relay 'K'.

b) The L.H. Clutch shown in Fig. 1 has been modified. This varies the adjustment procedure as below.

1) Tension of the upper section is controlled by the CLUTCH DISC and slight bending can increase or decrease tension as required.

2) After a prolonged period of use it may be noticed that the lower section is too freely running. This will cause overspill and it will then be necessary to replace the 'U' FRICTION SPRING shown in Fig. 1.

c) All the notes on dismantling and servicing still apply, but the Relay 'K' and its contacts must be taken into consideration during fault tracing.

d) The Potentiometer R.6. controls the variation in sensitivity caused by operation of the sensitivity switch.

e) Tone Control R.3. operates only on playback.

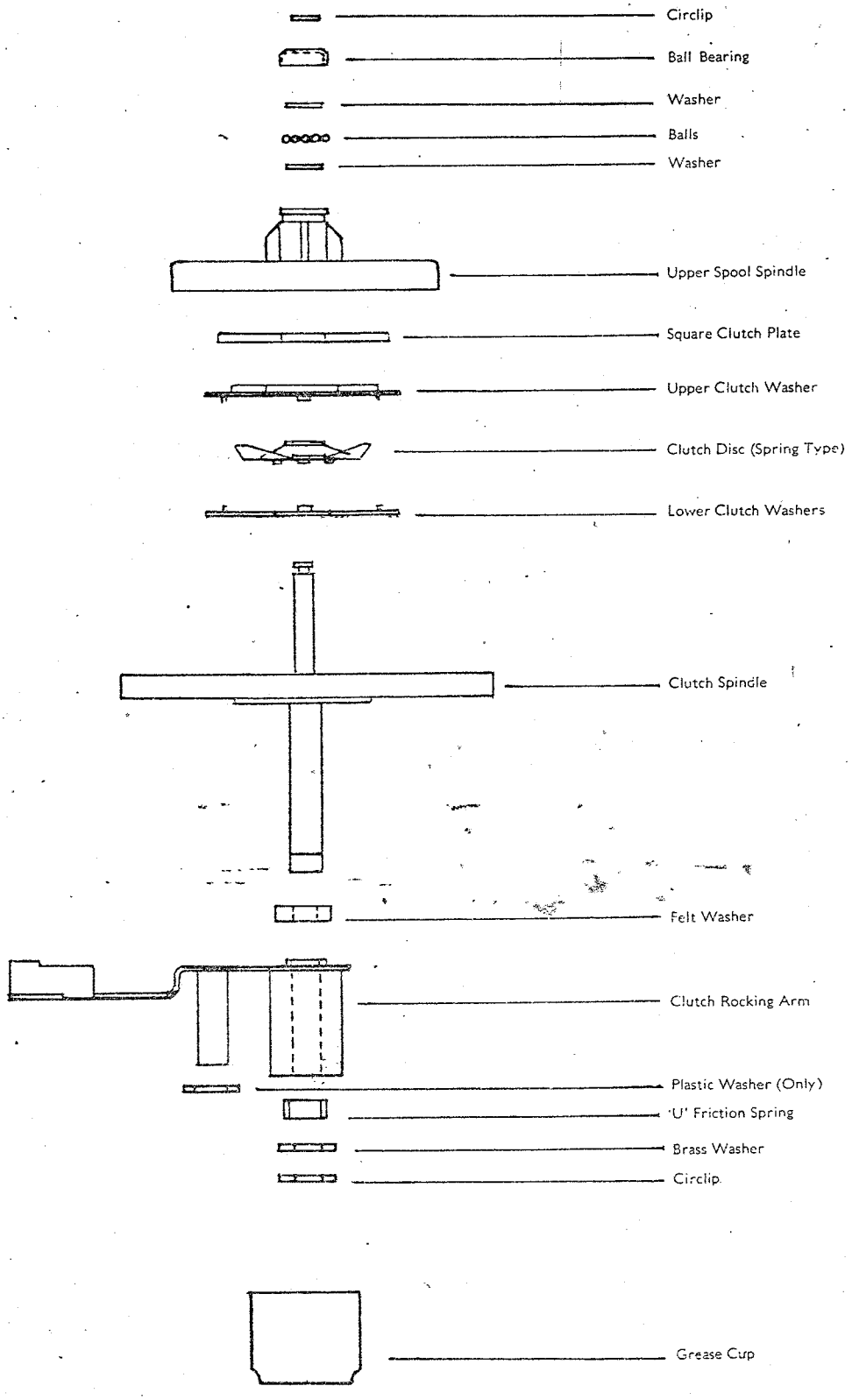

Fig. 1 The L.H. Clutch Assembly

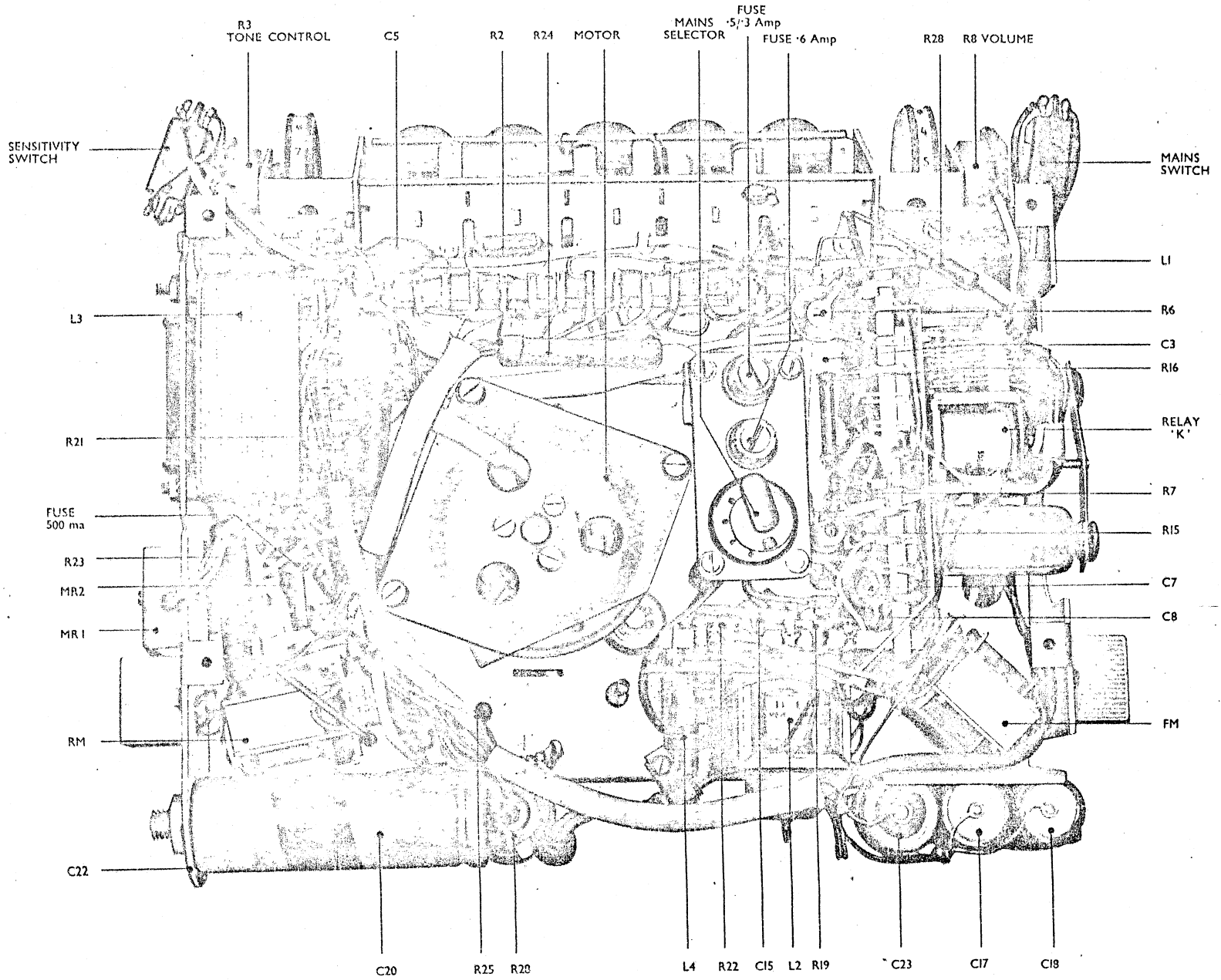

Fig. 2 BOTTOM VIEW OF CHASSIS

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